

**Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554**

In the Matter of)	
)	
Update to Parts 2 and 25 Concerning Non-Geostationary, Fixed-Satellite Service Systems and Related Matters)	IB Docket No. 16-48
)	

COMMENTS OF IRIDIUM SATELLITE LLC

Iridium Satellite LLC (“Iridium”) hereby comments on the Notice of Proposed Rulemaking in the above-captioned proceeding (the “NPRM”).¹

Iridium has participated in the development of separate comments filed by the Satellite Industry Association (“SIA”), of which it is a member. Iridium is submitting these comments to focus on an aspect of the NPRM that the SIA comments do not address and that is of particular concern to Iridium: the Commission’s proposal to modify its Ka-band Plan in the 19.3-19.4 GHz, 19.6-19.7 GHz and 29.3-29.5 GHz sub-bands (collectively, the “19 GHz and 29 GHz Sub-bands”).² Under this proposal, the Commission would (1) remove the Ka-band Plan designation in the 19 GHz and 29 GHz Sub-bands for operation of NGSO MSS feeder links on a primary basis; and (2) add Ka-band Plan designations in the 19 GHz and 29 GHz Sub-bands for operation of GSO FSS stations on a primary basis and NGSO FSS stations on a secondary basis.

Iridium has no objection to the Commission’s proposal for the 19 GHz and 29 GHz Sub-bands. For the reasons discussed below, however, in the future the Commission should take into

¹ *Update to Parts 2 and 25 Concerning Non-Geostationary, Fixed-Satellite Service Systems and Related Matters*, Notice of Proposed Rulemaking, IB Docket No. 16-408, FCC 16-170 (rel. Dec. 15, 2016) (“NPRM”).

² *See id.* ¶ 8.

account the potential impact of the proposal, if adopted, on Iridium's operations in adjacent bands.

As stated in the NPRM, the 19 GHz and 29 GHz Sub-bands are part of the larger 19.3-19.7 GHz and 29.1-29.5 GHz bands that at present are designated in the Ka-band Plan for operation of NGSO MSS feeder links on a co-primary basis with other services. Iridium and its customers hold multiple FCC licenses to operate feeder link earth stations that communicate with Iridium's NGSO MSS constellation. These licenses authorize operations in the 19.4-19.6 and 29.1-29.3 GHz bands (the "Iridium Feeder Link Bands"). Iridium and its customers have not, to date, requested authority to operate in the 19 GHz and 29 GHz Sub-band portions of the NGSO MSS feeder link bands.

The 19 GHz and 29 GHz Sub-bands are used by Iridium for gateways that are essential to the operation of Iridium's service. Every user communication on the Iridium satellite system is routed through a gateway earth station. Those users include individuals, businesses, and a variety of civil and government agencies around the world, including the U.S. Department of Defense. Iridium also employs these bands for the TT&C links it uses to control and command its space stations.

Until recently, Iridium's coordination of its feeder link operations with other satellite systems was relatively straightforward. The Iridium Feeder Link Bands were used by only a limited number of GSO FSS systems, and those GSO FSS systems only used the Iridium Feeder Link Bands to operate a limited number of gateway earth stations.

A number of developments, however, are putting additional strain on Iridium's present and planned feeder link operations at a time when Iridium is in the middle of launching its next-generation Iridium NEXT system to provide its own customers with higher throughput services.

An increasing number of GSO FSS systems are including the Iridium Feeder Link Bands on their systems. Further, multiple applicants in the Commission's NGSO FSS processing round have proposed to make use of the Iridium Feeder Link Bands, even though these bands were not part of the Public Notice initiating the processing round. And there is interest among GSO FSS licensees to seek rule changes that would permit them to operate earth stations in motion in the Iridium Feeder Link Bands.

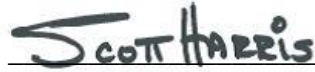
The increased GSO FSS activity in the Iridium Feeder Link Bands already has expanded the number of systems with which Iridium must coordinate, and further changes would make coordination perhaps incurably complex. Iridium would face a multiplicity of users and uses and be forced to operate in an environment in which it will be difficult to determine the source of interference that, even when brief and intermittent, can have catastrophic consequences.

The proposal in the NPRM for the 19 GHz and 29 GHz Sub-bands, if adopted, will put additional strain on Iridium's feeder link operations. Foreclosing Iridium from applying for feeder link licenses in the 19 GHz and 29 GHz Sub-bands will prevent Iridium from using those frequencies as an expansion band to accommodate the higher throughput requirements of the services Iridium will be delivering via Iridium NEXT and to satisfy increased demand for its services in the future. It also will keep Iridium from using the 19 GHz and 29 GHz Sub-bands for frequency diversity in the event that interference issues arise at particular locations.

Iridium recognizes the requirements for more intensive use of spectrum that are driving the Commission to make its proposal for the 19 GHz and 29 GHz Sub-bands. For this reason, Iridium is not opposing the proposal. The Commission, however, needs to balance those requirements against the increasing pressures Iridium is facing in the Iridium Feeder Link Bands. Iridium asks that the Commission give appropriate weight to these pressures as additional

proposals for use of the Iridium Feeder Link Bands come before it, to ensure that Iridium's feeder links continue to be protected.

Respectfully submitted,

A handwritten signature in black ink that reads "SCOTT HARRIS". The signature is written in a cursive, slightly stylized font. The first name "SCOTT" is written in all caps, and the last name "HARRIS" is also in all caps. The signature is positioned above a horizontal line.

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